

## **REMARKS**

The Office Action of February 23, 2004 has been reviewed and carefully considered.

Reconsideration of the above-identified application, in view of the following remarks, is respectfully requested.

In the Office Action of February 23, 2004 claims 1 to 5 and 8 to 11 have been rejected under 35 U.S.C. §102(b) as anticipated by Vowles et al. (U.S. Patent No. 5,238,437). Claims 6 and 7 have been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Claims 12 to 20 have been allowed.

Applicant expresses its appreciation for the Examiner's allowance of claims 12 to 20, and the indication of allowability (when rewritten in independent form) of claims 6 and 7. Claims 6 and 7 have not, however, for the moment been rewritten in independent form in view of the following remarks.

With respect to the anticipation rejection of claims 1 to 5 and 8 to 11, applicant respectfully disagrees, as explained below, that these claims are anticipated by Vowles et al., and contends that claims 1 to 5 and 8 to 11, in their current form, are in fact allowable over the Vowles et al. disclosure and all other prior art of which applicant is aware.

Independent claim 1 is drawn to an assembly for generating and emitting a continuous stream of bubbles from a supply of bubble liquid. With reference for convenience (and by way of illustrative example) to the embodiment of the invention

shown in the application drawings, claim 1 recites an apparatus that includes a reservoir (see reservoir 54 in Fig. 4) for receiving and retaining a supply of bubble liquid. Claim 1 further recites a bubbler conduit (see tube 72 in Fig. 8) that directs a *first airstream* into the supply of bubble liquid in the reservoir to create from the bubble liquid a froth of bubble liquid in a chamber (see chamber 78 in Figs. 7 and 8) that is defined in fluid communication with the reservoir. An exit outlet (see exit chimney 76 in Fig. 7) of the claimed apparatus is disposed in fluid communication with the chamber (78) and has an outer periphery. Claim 1 further describes an updraft chimney (see updraft chimney 66 in Fig. 7) that is disposed in fluid communication with the chamber (78) for directing a *second airstream* against the bubble liquid froth to drive the froth into the exit outlet (76) so that a film of the driven bubble liquid froth becomes attached to the exit outlet and the second airstream directed against the attached film creates from the attached film and inflates a bubble attached to the exit outlet. Finally, claim 1 describes a lift passageway (see third substream lift conduit 87 in Fig. 7) that is defined proximate the exit outlet (76) for directing a *third airstream* about the exit outlet periphery to facilitate detachment from the exit outlet of the created and inflated bubble attached to the exit outlet and displacement of the detached bubble away from the exit outlet.

Thus, claim 1 recites an apparatus that includes structure for creating three separate and distinct airstreams: (i) a *first airstream* directed by a bubbler conduit (e.g. tubes 72 in Fig. 8) into the supply of bubble liquid in the reservoir to create a bubble liquid froth in the chamber (e.g. foam chamber 78 in Figs. 7 and 8) that is defined in fluid communication with the reservoir, a *second airstream* directed by an updraft chimney (e.g. the updraft chimneys 66 in Fig. 7) against the bubble liquid froth to drive the froth into the

exit outlet so that a film of the driven bubble liquid froth becomes attached to the exit outlet and the second airstream directed against the attached film creates from the attached film and inflates a bubble attached to the exit outlet, and a *third airstream* which is directed by a lift passageway (e.g. the third substream lift conduit 77 in Fig. 7) about the exit outlet periphery to facilitate detachment from the exit outlet of the created and inflated bubble attached to the exit outlet and displacement of the detached bubble away from the exit outlet. It is by the actions of these *three, separate and distinct airstreams* to accomplish their respective recited functionalities that the apparatus described in claim 1 is operative for generating and emitting a continuous stream of bubbles formed from a supply of bubble liquid.

Independent claim 9 is similarly directed to a *method* of generating and emitting a stream of bubbles formed from a supply of bubble liquid. Thus, claim 9 recites the steps of: (i) directing a *first airstream* into a supply of the bubble liquid to create a froth of bubble liquid in a chamber; (ii) directing a *second airstream* against the froth in the chamber to direct the froth from the chamber to an exit outlet so that a film of driven bubble liquid froth becomes attached to the exit outlet and the second airstream directed against the attached film creates from the attached film and inflates a bubble attached to the exit outlet; and (iii) directing a *third airstream* peripherally about the exit outlet to facilitate detachment from the exit chimney of the created and inflated bubble attached to the exit outlet and displacement of the detached bubble away from the exit outlet. Accordingly, as in independent apparatus claim 1, independent method claim 9 expressly recites *three separate and distinct airstreams* that perform their respective functions to generate and emit a continuous stream of bubbles formed from a supply of bubble liquid.

Vowles et al. discloses a bubble dispensing doll that includes an integral bubble producing mechanism disposed within an upper aperture of the doll's head. In operation, a stream of bubbles is generated and emitted from an opening defined within a decorative crown that sits atop the doll's head.

The apparatus and method by which Vowles et al. generates and emits a stream of bubbles from the doll are, however, different and distinct from that recited in applicant's independent claims 1 and 9. Specifically, with reference to Fig. 3 of Vowles et al., a primary airstream 81 is generated in an air plenum 60 by rotation of fan impeller 65. The primary airflow 81 is divided at air duct 61 into two streams in the manner indicated by the arrow 82 and 86 in Fig. 3. The first substream 82, which Vowles et al describe as a "small portion of the air flow thus divided", "is forced upwardly through aperture 56 of foam chamber 55 in the direction indicated by arrows 83, 84 and 85. The small size of aperture 56 produces a foaming action of the bubbling solution within chamber 55 *which tends to be carried upwardly to nozzle 25* in the direction of arrows 84 and 85 by the small airflow through foam chamber 55." (Col. 4, ll. 58-65; emphasis supplied). Thus, a *single* airstream 82 both bubbles through the liquid contained at the bottom of foam chamber 55 to create (by "foaming action") a liquid froth (and thereby perform the function of applicant's claimed "first airstream") *and* is relied upon to carry the froth "upwardly to nozzle 25 in the direction of arrows 84 and 85 by the small airflow through foam chamber 55" (and thereby perform the function of applicant's claimed "second airstream").

The second air substream 86 of Vowles et al. - "the major portion of the airflow provided by air impeller 65" (col. 4, ll. 66-68) - flows upwardly through duct 61 (see Vowles et al. Fig. 3) and outwardly in a generally cylindrical airflow pattern emanating from

the annular space 33 to assist in forming and carrying away a bubble which grows from the outer lip of nozzle 25 (and thereby performs the function of applicant's claimed "third airstream").

Thus, whereas applicant's independent claims 1 and 9 recite *first*, *second* and *third* airstreams operative for generating and emitting a continuous stream of bubbles from a supply of bubble liquid, the bubble dispensing doll and mechanism of Vowles et al. merely discloses use of two (i.e. the first 82 and the second 86) airstreams to provide similar functionality. More specifically, whereas applicant's claimed apparatus and method direct a *first airstream* into the supply of bubble liquid to create a froth of bubble liquid in a chamber, and a *second airstream* against the froth to drive the froth into the exit outlet, the Vowles et al. bubble producing mechanism employs only a *single* airstream 82 to perform *both* these functions. (Both applicant's independent claims 1 and 9, on the one hand, and the mechanism of Vowles et al., on the other, employ a separate airstream -- the "third airstream" in applicant's claims, and the second airstream 86 in Vowles et al. -- similarly directed about the exit outlet periphery to facilitate detachment and displacement of the inflated bubble from the exit outlet.)

Neither does Vowles et al. include each and every one of the structural elements recited in applicant's independent apparatus claim 1 for directing its various airstreams -- namely, (i) a "bubbler conduit" for directing a first airstream into the supply of bubble liquid in the reservoir to create the bubble liquid froth in the chamber, (ii) an "updraft chimney" in fluid communication with the chamber for directing a second airstream against the froth to drive the froth into the exit outlet, and (iii) a "lift passageway" defined proximate

the exit outlet for directing a third airstream about the exit outlet periphery to facilitate detachment and displacement of the inflated bubble away from the exit outlet.

As should therefore be apparent, the disclosure of Vowles et al. fails to anticipate the express recitations of each of applicant's independent claims 1 and 9.

Neither is there any suggestion or motivation present in Vowles et al., or in any of the other art cited by the Examiner, for modifying Vowles et al. to meet the express recitations of applicant's independent claims 1 and 9. Indeed, the only possible motivation for the significant modification of the bubble generating mechanism of Vowles et al. as would be needed to bring the Vowles et al apparatus within the scope of applicant's claims could of necessity result only from impermissible hindsight reconstruction based on prior knowledge of applicant's disclosure and teachings.

Based on the foregoing, it is accordingly submitted that applicant's independent claims 1 and 9, as originally-presented, are in fact patentably distinct over Vowles et al. and all of the prior art of record and their allowance, and early passage of the case to issue, are once more requested.

Inasmuch as dependent claims 2 to 5 and 8 depend from independent claim 1, and dependent claims 10 and 11 depend from independent claim 9, those claims are also respectfully deemed allowable for at least the same reasons discussed above with respect to claims 1 and 9.

Favorable reconsideration of the rejected claims of the instant application is once again solicited.

It is believed that no additional fees or charges are required at this time in connection with the present application; however, should the payment of any such fees or

charges be deemed necessary at this time, the same may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

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